

# **Exhibit 8**

**BUSINESS**

# Plugged In: AMD gets crucial chip design wins on game consoles

**Kirk Ladendorf**

Published 12:01 a.m. CT Aug. 10, 2013 | Updated 12:20 p.m. CT Sept. 25, 2018

Sometime a few months before Christmas, consumers can expect the launch of two next-generation gaming systems from Microsoft Corp. and Sony Corp., which are expected to dazzle the eyes of consumers and hard-core gamers.

Games get played on lots of devices these days — everything from smart phones to powerful personal computers — but game consoles have a special place. Their users frequently connect their systems to big screen digital TV sets in order to catch the full glory of the advanced digital imagery created by the games and rendered on the screen by the console.

ABI Research expects the three largest game console makers will ship more than 133 million units of their newest systems over the next five years or so.



AMD's headquarters are in Sunnyvale, Calif., but Austin is where most of its senior executives live and much of its engineering work is done. The company employs about 2,000 people here.

The design wins for the game consoles were big deals for AMD. That's partly because the consoles will get to show off the technology that AMD has been promoting for the past few years — chips that combine both computer processing and advanced graphics processing on a single piece of silicon.

But there is also the other part of the story. AMD was hungry for a win because it was getting clobbered by rival Intel Corp. for the past few years in the personal computer business.

The company's PC market share had sat about 18 percent for several years before falling in 2011 and 2012 when it had trouble shipping a new product, called "Llano," on time. That unit market share dropped as low as 14.2 percent in the first quarter of this year before rebounding to 16.5 percent in the second quarter with the introduction of new products, according to Mercury Research, which tracks the computer market.

Slack customer demand and an awkward manufacturing agreement helped put AMD deep into red ink last year. It is expected to climb into profitability in the second half of this year as the game console business expands.

"Historically the game console market has proved to be a steady income stream," said analyst Dean McCarron with Mercury Research. "For a relatively smaller company like AMD, it offers a fairly good growth opportunity."

"AMD needed some big wins to show they could dominate in a specific market," said analyst Patrick Moorhead with Moor Insights & Strategy. "We know they are market share wins and emotional wins. It is unclear what the finances will look like."

Some financial analysts are projecting that AMD's position as the critical chip supplier both to Xbox and PS4 could generate as much as \$5 billion in extra revenue for the company over the expected five-year lifespans of the products. Manufacturing volumes for the new gaming chips are expected to increase strongly this quarter as Microsoft and Sony get ready for the product launches. No exact date for those launches has been released yet.

## Austin American Statesman

SERVING OUR COMMUNITY SINCE 1871

The analyst says Microsoft and Sony might have been reacting to their experience with IBM Corp. in the previous generation, where they invested heavily with new projects only to emerge with systems that were considered hard to write software for.

This time, the two companies, working separately, each decided to choose chip architectures with a broader availability of consumer software — ARM, which is the basis for most smart phones and tablets, or “x86,” the Intel/AMD camp that supplies chips to most of the world’s personal computers.

There was even a “bake-off,” Moorhead said, in which early prototype systems from AMD and ARM were pitted against one another in a battery of software tests. AMD won that test, the analyst said, and won the business.

AMD was promoting both cost-savings as well as top performance in its pitch to the console companies. It would a “semi-custom” design process, where the new gaming chip would be made up of components that already were being developed for the chip-maker’s PC business.

The chips that developed from the two gaming projects have strong similarities, but also significant differences. They both use AMD’s low-power “Jaguar” computing core as well as the company’s Radeon graphics processing technology. But they have distinctly different memory systems. And they each have their own “digital rights management” technology. DRM technology is designed to prevent users from violating copyrights by improperly copying games and other software used in the consoles.

AMD has several chip development centers around the world that get involved in big projects like this, but company officials acknowledge there was a considerable Austin engineering contribution to each of the two gaming projects.

The experience with the gaming chips proved that AMD’s “semi-custom” development process can work in products where there are high sales volumes to justify the engineering expense involved. AMD expects to expand its involvement with manufacturers in other markets over the next few years. Possibilities include television set-top boxes and data networking equipment, among others.

“We are pleased with where we are,” said Lisa Su, AMD’s general manager for global business units. “This is a big part of our transformation and growth story. It has definitely been top-of-mind for us.”



---

gaming chips. Gross margins equal product revenue minus the cost of production.

Su said there is a benefit from the gaming business that doesn't show up in gross margin ratios. Because its two big customers paid for most of the engineering cost of developing the new chips, that made it easier for AMD to accept lower prices on the products and still make good profits. And, over five years, the cost reductions related to producing the chips are expected to be substantial. That should translate to more profits over time.

As Su said, "We will continue to take costs out (of chip production) both for us and our customers."